
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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VANADIUM IN JUNE 1996

The total reported consumption of vanadium in June increased by about 37 percent from consumption in May, according to the U.S. Geological Survey. A 25 percent decrease in the carbon steel end use category was more than offset by medium to large increases in the other end use categories. Total consumption was 540 metric tons, about 70 percent more than consumption in June 1995. The year-to-date consumption in June was 2,350 tons, about 10 percent more than consumption for the same period in 1995.

Vanadium pentoxide prices firmed at \$3.05-3.20 per pound in June, and prices are expected to remain firm into the third quarter. Ferrovandium prices for the same period were holding at \$7.40-7.60 per pound-V in the United States and \$15.30-15.60 per kg-V in Europe. Normally, a \$3.05-3.20 per pound vanadium pentoxide price would translate to ferrovandium prices of about \$16.55 per kg-V. However, European converters are being squeezed by the decision of some South African producers to convert larger portions of their

vanadium pentoxide to ferrovandium. South Africa's largest vanadium producer plans to begin producing up to 200 tons of 80 percent ferrovandium each month. At the same time, the amount of vanadium-bearing slag and vanadium pentoxide available for export will be reduced. The influence this move by the South Africans will have on the market will depend on the actions of the other major producers.

UPDATE: Fort Belvoir, VA, August 28, 1996 On this date the Defense National Stockpile Center awarded no vanadium pentoxide under Invitation for Bids, DLA-VANADIUM-001. Vanadium pentoxide is offered for sale on the fourth Thursday of each month. Bids are due by 10:00 a.m., local time, on September 26, 1996, at 8725 John J. Kingman Road, Suite 3339 (mail) or Suite 4528 (hand delivery), Fort. Belvoir, VA 22060-6223. Bids may be submitted by facsimile transmission to (703) 767-5541. Request for copies of the invitation should be directed to Kerri Chambers at (703) 767-5498.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM, IN 1996 1/

(Kilograms, contained vanadium)

	May		June	
	Consumption	Stocks	Consumption	Stocks
Ferrovanadium 2/	356,000 r/	297,000 r/	509,000	294,000
Oxide	1,120	6,610	1,120	6,610
Vanadium-aluminum alloy	W	15,400	W	9,970
Vanadium chemicals 3/	W	W	W	W
Other 4/	36,400 r/	19,600 r/	29,600	4,520
Total	394,000 r/	339,000 r/	540,000	315,000

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes vanadates, chlorides and other specialty chemicals.

4/ Includes other vanadium alloys, vanadium metal, and items indicated by symbol "W."

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1995	1996		
		May	June	Year to date p/ 2/
Steel:				
Carbon	1,620,000	185,000	139,000	889,000
Stainless and heat-resisting	31,100	1,650	1,620	11,700
Full alloy	825,000	68,100 r/	261,000	594,000
High-strength low-alloy	1,060,000	67,700	71,700	460,000
Tool	344,000	27,600	31,000	188,000
Unspecified	W	--	--	--
Total steel	3,880,000	351,000 r/	504,000	2,140,000
Cast irons	W	W	W	W
Superalloys	19,200	1,860 r/	2,690	8,780
Alloys (excluding steels and superalloys):				
Cutting and wear-resistant materials	245	20	20	122
Welding and alloy hard-facing rods and materials	W	W	W	W
Nonferrous alloys	W	W	W	W
Other alloys 3/	W	W	W	W
Chemical and ceramic uses:				
Catalysts	W	W	W	W
Other 4/	W	W	W	W
Miscellaneous and unspecified	356,000	41,100	32,900	196,000
Total consumption	4,260,000	394,000 r/	540,000	2,350,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to previous months' data.

3/ Includes magnetic alloys.

4/ Includes pigments.

TABLE 3
U. S. EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY, FERROVANADIUM, OXIDES
AND HYDROXIDES OF VANADIUM, AND VANADIUM METAL IN MAY 1996 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date p/	
			Quantity	Value
Aluminum-vanadium master alloy: 2/				
Argentina	--	--	1,080	\$14,000
Austria	--	--	1,940	32,200
Canada	18,500	\$241,000	73,700	890,000
Germany	100	3,000	100	3,000
Ireland	--	--	181	4,600
Japan	5,250	106,000	6,300	120,000
Korea, Republic of	--	--	3,270	42,500
Malaysia	--	--	897	11,700
Mexico	2,480	32,200	19,700	263,000
Suriname	--	--	139	6,460
United Kingdom	--	--	21,100	368,000
Venezuela	--	--	3,810	49,600
Total	26,400	383,000	132,000	1,810,000
Ferrovanadium:				
Australia	546	6,830	546	6,830
Canada	29,700	587,000	122,000	2,110,000
Mexico	13,400	273,000	96,900	1,830,000
Venezuela	--	--	2,300	76,800
Total	43,600	867,000	222,000	4,020,000
Vanadium pentoxide (anhydride): 3/				
Italy	17,200	123,000	56,800	446,000
Japan	8,700	80,200	13,800	126,000
Kuwait	--	--	4,970	34,300
Pakistan	--	--	6,040	83,600
United Kingdom	24,200	180,000	40,100	331,000
Total	50,000	383,000	122,000	1,020,000
Other oxides and hydroxides of vanadium:				
Australia	--	--	675	6,000
Canada	20,000	138,000	105,000	726,000
France	--	--	15,200	128,000
Germany	--	--	6,290	67,300
Japan	100	3,610	100	3,610
Russia	--	--	12,300	110,000
South Africa	--	--	20,000	151,000
Spain	--	--	2,210,000	9,030,000
Switzerland	--	--	6,880	37,100
Total	20,100	142,000	2,380,000	10,300,000
Vanadium metal, including waste and scrap: 2/				
Australia	--	--	2,320	92,000
Canada	118	3,050	118	3,050
Germany	5	2,870	636	18,100
Taiwan	--	--	131	11,900
United Kingdom	--	--	84,300	548,000
Total	123	5,920	87,500	673,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross weight.

3/ May include catalysts containing vanadium pentoxide.

Source: Bureau of the Census.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF ALUMINUM-VANADIUM MASTER ALLOY,
FERROVANADIUM, OXIDES AND HYDROXIDES OF VANADIUM, AND VANADIUM METAL IN MAY 1996 1/

(Kilograms, vanadium content unless otherwise specified)

Material and country	Quantity	Value	Year to date p/	
			Quantity	Value
Aluminum-vanadium master alloy: 2/				
Germany	1,390	\$6,150 3/	183,000	\$258,000
Ferrovandium:				
Austria	--	--	27,300	430,000
Belgium	--	--	62,700	947,000
Canada	46,000	703,000	249,000	3,730,000
Czech Republic	32,000	454,000	198,000	2,720,000
Germany	819	16,100	3,820	32,300
Russia	--	--	14,900	171,000
South Africa	31,600	481,000	77,600	1,180,000
Tajikistan	14,000	219,000	40,500	626,000
Total	124,000	1,870,000	674,000	9,840,000
Vanadium pentoxide (anhydride): 4/				
China	--	--	40,800	329,000
France	400 3/	27,200 3/	12,200	217,000
Germany	--	--	327	14,400
South Africa	30,800	382,000	167,000	2,080,000
Total	31,200	409,000	220,000	2,640,000
Other oxides and hydroxides of vanadium:				
France	--	--	304	48,600
Germany	--	--	1	2,610
United Kingdom	--	--	6,030	76,000
Total	--	--	6,340	127,000
Vanadium metal, including waste and scrap: 2/				
France	90	8,500	90	8,500
Germany	--	--	25,600	500,000
Russia	638	28,900	1,140	50,300
South Africa	--	--	58,300	1,140,000
United Kingdom	--	--	1	4,220
Total	728	37,400	85,100	1,710,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross weight.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

4/ May include catalysts containing vanadium pentoxide.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING
ASH, SLAG AND RESIDUES IN MAY 1996 1/

(Kilograms, vanadium pentoxide content)

Material and country	Quantity	Value	Year to date p/	
			Quantity	Value
Ash and residues:				
Canada	--	--	66,100	\$276,000
Mexico	--	--	172,000	994,000
Netherlands	--	--	7,760	2,670
Portugal	--	--	7,130	6,470
Total	--	--	253,000	1,280,000
Ash and residues (not from the manufacture of iron and steel):				
Canada	73,500	\$16,200	597,000	135,000
Slag, from the manufacture of iron and steel:				
South Africa	--	--	304,000	1,180,000
Other residues: (Not advanced in value)	--	--	--	--

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS
VANADIUM CHEMICALS IN MAY 1996 1/

(Kilograms, vanadium content)

Material and country	Quantity	Value	Year to date p/	
			Quantity	Value
Sulfates:				
India	25	\$14,900	25	\$14,900
Vanadates:				
Germany	70	\$1,320	3,250	70,700
South Africa	--	--	12,300	82,800
Total	70	\$1,320	15,500	154,000
Hydrides and nitrides:				
South Africa	66,900	1,170,000	197,000	3,490,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.